II. *What a Compleat* Treatiſe *of* Navigation *ſhould contain. Drawn up in the Year* 1685. *by Sir* William Petty *late Fellow of the Royal Society.*

1. WHat *Arithmetick* in whole Numbers and Fractions, as alſo in *Decimals* and *Logarithmes*, is neceſſary for the ſame? And what *Books* are beſt for teaching ſo much thereof?

2. What *Vulgar Practical Mechanical Geometry* performable by the Scale and Compaſs is ſufficient?

3. What *Trigonometry*, Right Lined, and Spherical will ſuffice?

4. How many Stars are to be known?

5. What *Inſtruments* are beſt for uſe at Sea, with the Conſtruction of them, and the manner of uſing them?

6. The whole Skill of the *Magnet*, as to the directive Vertues thereof, and all the Accidents which may befall it.

7. The *Hydrography* of the Globe of the Earth, the Perſpective of the Coaſts, and the Deſcription of the under-water-bottom of the Sea.

8. The knowledge of *Winds* and *Meteors*, ſo far as the ſame is attainable.

9. The Hiſtory and Skill of all ſorts of *Fiſhings*.

10. The Art of *Medicine* and *Chyrurgery*, peculiarly for the Sea.

11. The Common Laws of the *Admiralty*, and *Juriſdiction* of the Sea.

12. The ſeveral *Victuallings* and *Cloathings*, fit for Sea-men.

13. The whole Science of *Ebbing* and *Flowing*, as alſo of *Currents* and *Eddyes* at Sea.

14. *Dromometry*, and the Meaſures of a Ships Motions at Sea.

15. The *Building* of *Ships* of all ſorts, with the ſeveral *Rigging* and *Sails* for each *Species*, and the *Uſe* of all the *Parts* and *Motions* of a *Ship*.

16. Naval *Oeconomy* according to ſeveral Voyages and Countries.

17. The *Art* of *Conting*, *Rowing* and *Sailing* of all the ſeveral ſorts of *Veſſels*.

18. The *Gunnery*, *Fire-works* and other *Armatures* peculiar to Sea and Sea-Fights.

19. The Art of *Loading* and *Unloading* the Chief Commodities, to the beſt Advantage.

20. The Art of *Weighing* ſunken Ships and Goods, as alſo of *diving* for ſunken Goods in deep Water.

21. The General *Philoſophy* of the *Motion* and *Figures* of the *Air*, the *Sea*, and of *Seaſons*; of *Timber*, *Iron*, *Hemp*, *Tar*, *Brimſtone*, *Tallow*, &c. and of their ſeveral Uſes in Naval Affairs.

22. An Account of Five or Six of the beſt *Navies* of *Europe*, with that of the *Arcenals*, *Magazines*, *Docks*, *Yards*, *&c.*

23. An Account of all the *Shipping* able to croſs the Seas belonging to each Kingdom and State of *Europe*.

24. An Account of all the chief *Commercial parts* of the *World*; with mention of what Commodities are originally carried from, and ultimately to any of them.

25. An Account of the Chief *Sea-Fights*, and all other *Naval Expeditions* and *Exploits*, relating to *War*, *Trade* or *Diſcovery*, which hath happened in this laſt Century.

26. Of the moſt advantageous uſe of *Teleſcopes* for ſeveral purpoſes at Sea.

27. Of the ſeveral *Depths* of the Sea, and Heights of the *Atmoſphere*.

28. The

28. The Art of making *Sea-Water freſh* and potable, and fit for all uſes in Food and Phyſick at Sea.

III. *A Letter from Sir* Robert Redding, *late Fellow of the R. S. concerning Pearl-Fiſhing in the North of* Ireland; *communicated to the Publiſher by Dr.* Liſter. *R. S. S.*

Dear SIR,

BEing in the North in *Auguſt* laſt, and calling to remembrance your Deſires to have ſome of the Muſcle-ſhells ſent you wherein the Pearls were found, I ſtayed behind my Company one day like an old Hound from following the Stag, and beſtowed it in Enquiries from others, and ſome ſmall Trials in the Rivers; but having by me neither Queries to direct my Search, nor Books to inform me what had been delivered by others on this Subject, I muſt needs fall ſhort in thoſe Points that are moſt curious and moſt wanting, and take notice only of what is too common and moſt known in the Natural Hiſtory of this Shell-fiſh.

I have ſent you four or five of the Shells, and a few of the Pearls, though clouded and little worth, taken out of the River near *Omagh* in the County of *Tyrone*, in which County are four Rivers abounding with theſe Muſcles, all emptying themſelves into *Lough foyle*, whereon ſtands the Town of *Derry*, and ſo into the Sea. There are alſo other Rivers in the County of *Donegall*, a River near *Dundalk*, the *Shure* running by *Waterford*, the *Lough* called *Lough-Lean* in *Kerry*, which afford the like Fiſh; and no doubt there be many more that I do